AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A method for redirecting traffic in a SONET ring family ~~when a fault is detected,~~ comprising the steps of:

~~creating and assigning an addition~~ a second protection SONET ring to ~~the~~ a SONET ring family comprising a first protection SONET ring, the first protection SONET ring distinct from the second protection SONET ring and connected to a first optical transport system line, the second protection SONET ring connected to a second optical transport system line;

detecting a service alarm ~~in a~~ at least one ring of the SONET ring family;

~~determining whether there are any service alarms on a protection ring in said SONET ring family;~~

~~determining whether the protection ring is in use;~~

~~marking the protection ring as being in use if no alarms in the protection ring are detected in the protection ring is not in use;~~ and

directing traffic from the at least one ring in which a service alarm is detected ~~on to said~~ onto the first protection SONET ring or the second protection SONET ring.

2. (original) The method according to claim 1, wherein a ring family is a set of rings that share the same fiber sheath

3. (original) The method according to claim 2, wherein the ring family shares dense wavelength division multiplexed optical transport systems on each span around the rings.

4. (original) The method according to claim 1, wherein said protection ring has nodes in all nodes served by said ring family.

5. (original) The method according to claim 1, wherein failed facilities are routed to the same tributaries on the protection as on the ring in which the service alarm is detected.

6. (original) The method according to claim 5, wherein the facilities are provisioned on the service ring from lowest tributary to highest tributary and the facilities on the protection ring are provisioned from highest tributary to lowest tributary.

7. (Currently Amended) A method for redirecting traffic in a SONET ring family ~~when a faults affecting all of the rings in the ring family is detected,~~ comprising the steps of:

~~creating and assigning an addition~~ a second protection SONET ring to ~~the~~ a SONET ring family comprising a first protection SONET ring, the first protection SONET ring distinct from the second protection SONET ring and connected to a first optical transport system line, the second protection SONET ring connected to a second optical transport system line;

~~assigning service and protection lines on the SONET rings to optical transport systems in a first manner;~~

detecting a service alarm associated with ~~in a SONET~~ a subset of rings ~~in said~~ of the SONET ring family;

~~. Determining from which span in said SONET ring the service alarm was detected;~~

~~determining whether there are any service alarms on a span in the protection ring which corresponds to the failed span in the SONET ring;~~

~~determining whether the span on the protection ring is in use;~~

~~marking the protection ring in use the only alarm on the protection ring corresponds to the same span as the failed span on the service SONET ring;~~ and

directing traffic from ~~the~~ a highest priority ring ~~failed spans to spans in the protection ring around the opposite side of the ring~~ of said subset of rings to the second protection SONET ring.

8. (original) The method according to claim 7, wherein a ring family is a set of rings that share the same fiber sheath.

9. (original) The method according to claim 8, wherein the ring family shares dense wavelength division multiplexed optical transport systems on each span around the rings.

10. (original) The method according to claim 7, wherein said protection ring has nodes in all nodes served by said ring family.

11. (original) The method according to claim 7, wherein failed facilities are routed to the same tributaries on the protection as on the ring in which the service alarm is detected.

12. (original) The method according to claim 11, wherein the facilities are provisioned on the service ring from lowest tributary to highest tributary and the facilities on the protection ring are provisioned from highest tributary to lowest tributary.

13. (new) The method according to claim 1, further comprising determining whether there are any service alarms on the second protection SONET ring.

14. (new) The method according to claim 1, further comprising determining whether the the second protection SONET ring is in use.

15. (new) The method according to claim 1, further comprising marking the protection ring as being in use if no alarms in the protection ring are detected in the protection ring is not in use.

16. (new) The method according to claim 1, further comprising determining from which span of at least one SONET ring the service alarm was detected.

17. (new) The method according to claim 7, further comprising determining whether there are any service alarms associated with the second protection SONET ring.

18. (new) The method according to claim 7, further comprising determining whether the second protection SONET ring is in use.

19. (new) The method according to claim 7, further comprising marking second protection SONET ring as in use.

20. (new) A machine-readable medium comprising stored instructions for:

assigning a second protection SONET ring to a SONET ring family comprising a first protection SONET ring, the first protection SONET ring distinct from the second protection SONET ring and connected to a first optical transport system line, the second protection SONET ring connected to a second optical transport system line;

detecting a service alarm in at least one ring of the SONET ring family; and

directing traffic from the at least one ring in which a service alarm is detected onto the first protection SONET ring or the second protection SONET ring.